

OMB APPROVAL	
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* JONES ROBERT G			2. Issuer Name and Ticker or Trading Symbol ARCH COAL INC [ACI]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) VP-Law, Gen. Counsel & Secy		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 02/07/2008			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person		
ONE CITYPLACE DRIVE			4. If Amendment, Date of Original Filed (Month/Day/Year)					
(Street)	(City)	(State)	(Zip)	ST. LOUIS MO 63141				

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common stock ⁽¹⁾	02/07/2008		M		5,450	A	(1)	14,755	D	
Common stock								4,426	I	By 401(k) plan

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Performance-contingent phantom stock	(2)	02/07/2008		M			10,900	(3)	12/31/2008	Common stock	10,900	(1)	0	D	

Explanation of Responses:

- The reporting person received 21,800 performance-contingent phantom shares on July 28, 2005. One-half of the performance contingent phantom shares vest if the average closing price of Arch Coal, Inc.'s common stock for a period of 20 consecutive trading days meets or exceeds \$40.00, subject to the achievement of certain financial performance targets. Upon vesting of 10,900 performance contingent phantom shares on February 7, 2008, the reporting person received 5,450 shares of common stock and \$267,650 in cash.
- Each performance-contingent phantom share represents a right to receive one share of common or the cash value thereof, unless otherwise deferred at the reporting person's election, pursuant to the Arch Coal, Inc. Executive Deferred Compensation Plan.
- The reporting person received 21,800 performance-contingent phantom shares on July 28, 2005. One-half of the performance-contingent phantom shares vest if the average closing price of Arch Coal's common stock for a period of 20 consecutive trading days meets or exceeds \$35.00 and the other half of the performance shares vest if the average closing price of Arch Coal's common stock for a period of 20 consecutive trading days meets or exceeds \$40.00, subject, in each case to the achievement of certain financial performance targets. On February 7, 2008, 10,900 performance-contingent phantom shares vested.

Remarks:

/s/ Gregory A. Billhartz,
Attorney-in-Fact 02/11/2008

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.